

REMARKS

The Examiner's Office Action dated April 8, 2004, has been reviewed. Reconsideration and allowance are respectfully requested in view of the foregoing amendments and the following remarks.

Claims 1, 3, 4, 5, 7, 9-12, 17-24, 27-29 and 34 are now pending in this application.

Claims 2, 8, 13-16, 25, 26, and 30-33 have been cancelled without prejudice.

Claims 1, 17, 18, 19, 24, 27, 28 and 29 have been amended.

New Claim 34 has been added.

Regarding the Section 102 Rejection.

Claims 13-17, 19, 24-27, 29 and 30 were rejected under 35 U.S.C. §102(b) for being anticipated by Herve (U.S. Patent No. 4,471,216).

Claims 13-16 have been cancelled thereby rendering rejections of these claims moot.

Claims 17 and 19 are dependent upon new Claim 34.

Applicant respectfully points out that Herve teaches a system and process for identification of persons requesting access to particular facilities. In doing so, Herve teaches to be a portable object 1 that is put in electrical connection with a apparatus or facility 2. The portable apparatus 1 has a memory that is divided into three zones, a secret zone, a read zone and a working zone. See Herve, column 3, lines 3-10. The memory of the facility 2 is also divided into three zones. The portable object 1 is put in electrical connection with the facility 2. First an identification code is passed from the portable object to the facility. The facility checks the identification code and the facility then generates a random number which is transmitted to the portable object 1. At this point, the processors 4 of the portable object and the processor 5 of the facility each calculate a random number R which is a function of a secret code, which both the

facility and the portable object have but don't pass back and forth to each other. See column 3, lines 11 through column 4, line 31. At some point in time the result of the calculation R, by each of the processors 4 and 5, is compared. If the results are the same, then the portable device is authenticated. The device illustrated in Figure 2 of Herve shows a portable object 1 such as a credit card. Applicant notes that in Herve the portable object credit card is limited to operating for a single service provider. Herve does not teach, elude to or anticipate the use of a single portable object that can be used by a plurality of service providers, for example, VISA, MasterCard, American Express, gasoline station credit cards or department store credit cards, etc. See Herve, column 4, lines 39-42.

Claim 34 is directed to a method of device authentication for a plurality of service providers. Claim 34 recites that the "first nonreversible computation result is computed by seeding an algorithm with the received challenge, a secret known by said roaming device and said device, a unique roaming device identifier, and one of a for a plurality of service provider identifiers." Claim 34 recites the use of the "one of a for a plurality of service provider identifiers" as being part of the second nonreversible computation. Furthermore, Claim 34 compares "said first nonreversible computation result with said second nonreversible computation result in order to authenticate the roaming device for a selected one of a plurality of service providers." As such, Applicant respectfully points out the Claim 34 and thus dependent Claims 17 and 18 are not anticipated by Herve because Herve does not anticipate multiple service provider identifiers and thus the use of a single Herve device with a plurality of service providers and respectfully requests that this Section 102 rejection be withdrawn.

Claim 19 has been amended to recite, among other things, that the roaming security device is "configured to store a plurality of different service provider data items such that said roaming security device be communicate with a plurality of different service providers."

As discussed above, Herve does not teach, elude to or anticipate the use of its portable device with a plurality of different service providers. Nor does Herve teach the storage of a plurality of different service provider data items. Applicant respectfully submits that Claim 19 is not anticipated by Herve and respectfully requests that the Section 102 rejection be withdrawn.

Independent Claim 24 has been amended to recite, among other things “seeding a first nonreversible algorithm with at least the challenge, a selected service provider data item, and a roaming device secret.”

As discussed above, Herve does not teach, elude to or anticipate a portable device, such as a credit card or other portable electronic device that could be used with a plurality of service providers. As such, Applicant respectfully requests that the Section 102 rejection be withdrawn.

Claims 27 and 29 are dependent upon Claim 24 and are therefore not anticipated for the same reasons as stated above with respect to Claim 24. Applicant respectfully requests that the Section 102 rejection be withdrawn.

Claims 25, 26 and 30 have been cancelled thereby rendering the Section 102 rejection to these claims moot.

Claims 1-7, 9, 13-17, 19, 24-27 and 29-32 were rejected under 35 U.S.C. § 102(b) as being anticipated by Pieterse (U.S. Patent No. 5,907,832).

Applicant respectfully points out that Pieterse operates quite differently from the claimed invention. In particular, as indicated in column 4 beginning at line 29 of Pieterse in a first step the terminal produces a first random number R1 and transfers the random number to the card (the portable device) of Pieterse. On the basis of the random number R1 and other data, preferably including the card balance S1, the card produces an authentication code (MAC1) and provides it to the terminal device. In a second step, (Pieterse, column 4, line 46), the terminal of Pieterse sends a debiting command D to the card indicating the amount of money to be debited

from the card. In a third step, (Pieterse, column 4, line 54), the terminal produces a second random number and transfers that second random number to the card (the portable device) and the card uses the second random number to generate a second authentication code (MAC2). As we can see, the Pieterse roaming device is creating both a MAC1 and a MAC2 authentication codes in response to two different random numbers provided by the terminal. Applicant respectfully points out that Pieterse is a different device using a very different set of steps than those of various exemplary embodiments of the presently claimed invention.

Applicant also respectfully points out that Pieterse does not teach, elude to or anticipate the use of its algorithm or combination of terminal and card in such a manner that the same card can be used and provide services for a plurality of service providers. In particular, Pieterse does not teach, elude to or anticipate using its card for more than one service provider. Applicant respectfully submits that Pieterse is limited to using its designated card for only a single service provider.

Claim 1, as amended, recites a memory device comparing a first memory portion configured to store a device ID, a second memory portion configured to store a device secret, and a third memory portion configured to store a service provider data item. Claim 1 further recites a processor connected to the memory device that is configured to “perform a nonreversible computation using the stored device ID, the stored device secret, and the stored device service provider data item, and a challenge, as seeds” for the nonreversible computation. Applicant respectfully points out that the use of service of a service provider data item, that indicates a particular service provider for whom the portable security device may be used for is not taught, eluded to or anticipated in Pieterse or any of the cited art. Applicant respectfully submits that claim 1 is not anticipated by Pieterse and respectfully requests that the Section 102 rejection be withdrawn.

Claims 3, 4, 5 and 7 are each either directly or indirectly dependent upon Claim 1 and are therefore not anticipated for at least the same reasons as stated above with respect to Claim 1.

Applicant respectfully requests that the Section 102 rejection be withdrawn.

Claim 9 is also dependent upon Independent Claim 1 and is therefore not anticipated for at least the same reasons as stated above with respect to Claim 1.

Claims 2, 6 and 13-16 have been cancelled rendering the Section 102 rejections to these claims moot.

Claim 17 is dependent upon new Claim 34 which recites, among other things, that the “first nonreversible computation result is computed by seeding an algorithm with the receive challenge, a secret known by said roaming device and said device, a unique roaming device identifier, and one of a plurality of service provider identifiers. Furthermore, independent claim 34 does not require the roaming device to perform to nonreversible computation results as is taught by Pieterse. On the contrary, a second nonreversible computation result is generated by the device, rather than the roaming device in new Claim 34. As such, Applicant respectfully submits that Claim 17 is not anticipated by Pieterse and respectfully requests the Section 102 rejection be withdrawn.

Independent Claim 19, as amended, recites a “roaming security device being configured to store a plurality of different service provider data items such that said roaming security device may communicate with a plurality of different service providers.” As discussed above with respect to other rejected claims, Pieterse does not teach, elude to or anticipate the use of its credit card to be adaptable for providing services such as credit services from a plurality of different service providers. Applicant respectfully submits that Claim 19 is not anticipated and respectfully requests that this Section 102 rejection be withdrawn.

Independent Claim 24 recites, among other things, generating, at the host device a second nonreversible computation result. Applicant respectfully submits that Pieterse does not teach, elude to or anticipate the Pieterse does not teach, elude to or anticipate the host device that generates a nonreversible computation result. As stated above with respect to Pieterse, Pieterse requires that the roaming device or credit card produces both the first and the second nonreversible computation results. As such, Applicant respectfully submits that Claim 24 is not anticipated by Pieterse and respectfully requests that this Section 102 rejection be withdrawn.

Claims 27 and 29 are each dependent upon Claim 24 and are therefore not anticipated for at least the same reasons as stated above with respect to Claim 24. Applicant respectfully requests that this Section 102 rejection be withdrawn.

Regarding the Section 103 Rejections

Applicant respectfully submits that none of the art cited in the Section 103 rejection overcomes the inadequacies of either Herve or Pieterse and therefore do not aide in teaching, eluding to or rendering obvious the rejected claims. Applicant submits that all pending claims are ready for allowance and respectfully requests that this Section 103 rejection be withdrawn.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue

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Respectfully submitted,

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